

Application No. 10/585,506
Amendment Dated February 25, 2009
Reply to Office Action of November 25, 2008

REMARKS

Applicants respectfully request further examination and reconsideration in view of the amendments above and the arguments set forth fully below. In the Office Action dated November 25, 2008, the specification has been objected to, claim 56 has been objected to, and claims 42-67 have been rejected. In response, the Applicants have amended the specification, amended claims 42, 57 and 60, and cancelled claim 56. Accordingly, claims 42-55 and 57-67 are still pending. Favorable reconsideration is respectfully requested in view of the amendments above and the arguments set forth fully below.

Specification

Within the Office Action, the title of the invention has been objected to as not being descriptive. By the above amendments, the Applicant has amended the title to be more descriptive, and respectfully requests that the Examiner withdraw this objection, as the new title is clearly indicative of the invention to which the claims are directed.

Claim Objections

Within the Office Action, claim 56 has been objected to under 37 CFR 1.75 as being a substantial duplicate of claim 55. In response, the Applicants have cancelled claim 56, and therefore respectfully request the Examiner to withdraw this objection to claim 56 as being moot.

Rejections Under 35 U.S.C. §102

Claims 42-46, 50-51 and 54-57 have been rejected under 35 U.S.C. §102(b) as being anticipated by EP Application No. 1291199 to Topcon (hereinafter Topcon). The Applicants respectfully disagree with this rejection. Topcon discloses a card true/false decision apparatus including projecting a measuring beam of light from a predetermined direction onto a hologram formed on a predetermined position on a card. It should be noted that holograms are designed by optimizing two interfering wave fronts with the hologram being the interference produced by two point sources whose locations in space are clearly defined. It is of the utmost importance to understand that the optical interference pattern produced

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when a hologram is reconstructed does not produce a patterned beam of selected design. Accordingly, Topcon does not teach, as is stated in the Office Action, a diffractive optical projection element which transforms a beam of light into a patterned beam of light that is reconstructed at a particular position in space to form a projected image. Following this reasoning, Topcon then cannot teach an optical detection device utilized to reconstruct the patterned beam of light to form the projected image.

In contrast to the teachings of Topcon, the diffractive optical projection element of the present application has a specific meaning in the field of security documents. The purpose of this diffractive optical projection element (DOE) is to transform a portion of light beam from a light source into a patterned beam of selected design. A DOE is a complicated surface microrelease structure specifically engineered in each case, and according to a predetermined mathematical formula, in order to effect a distinct optical transformation. As was discussed previously, Topcon teaches the optimization of two interfering wave fronts where a hologram is the interference produced by two point sources whose location in space are clearly defined. Topcon does not teach the DOE that transforms a beam of light into a patterned beam of light, as taught and claimed in the present application. By the above amendments, the Applicants further clarify and distinguish the present application over the Topcon reference by amending independent claims 42 and 57 to further illustrate that the DOE is being provided in a substantially transparent or translucent portion or window in the security document, that is further not taught in the Topcon reference.

The independent claim 42 is directed to an apparatus for inspection of at least one security article incorporating a diffractive optical projection element as a security device, the diffractive optical projection element being provided in a substantially transparent or translucent portion or window in the security document, wherein the apparatus comprises a light source for directing a beam of light onto said diffractive optical projection element in said transparent or translucent portion or window, wherein the diffractive optical projection element transforms the beam into a patterned beam of light that is reconstructed at a particular position in space to form a projected image; and at least one optical detection device located at the position at which the patterned beam of light is reconstructed to form the projected image. As discussed above, Topcon does not teach a DOE being provided in a

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substantially transparent or translucent portion or window in a security document. Accordingly, the independent claim 42 is allowable over the teachings of Topcon.

The independent claim 57 includes elements similar to those discussed and claimed in the independent claim 42. Accordingly, the Applicants respectfully submit that the independent claim 57 is allowable over the teachings of Topcon for the same reasons as discussed above with respect to the independent claim 42.

Claims 43-46, 50-51 and 54-55 are dependent upon the independent claim 42. As discussed above, the impendent claim 42 is allowable over the teachings of Topcon. Accordingly, claims 43-46, 50-51 and 54-55 are also allowable as being dependent upon an allowable base claim. Claim 56 has been cancelled.

Rejections Under 35 U.S.C. §103

Claims 47-49, 52 and 53 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Topcon. The Applicants respectfully disagree with this rejection.

Within the Office Action it is stated that Topcon discloses all of the limitations as applied to claim 42 except that Topcon fails to disclose the DOE being provided in a substantially transparent or translucent portion and that the light source and detector are on opposite sides of the window for transmission detection. The Office Action then goes on to cite two additional references that are not part of the official rejection, stating that substituting transmission for reflection would be within routine skill in the art.

The Applicant respectfully submits that these additionally cited documents, while discussing transmission and reflection for determining the authenticity of documents, do not discuss how a diffractive optical projection element (DOE) can be provided on a security article such that it may be examined in either transmission or reflection. The Applicant is at a loss with how the Examiner arrives at the conclusion to suggest that substituting transmission for reflection would be routine when a particular type of security device is disclosed and when documents such as the Topcon reference, which will be discussed later in detail, specifically show having the diffractive optical element on both sides of the security article, in this case a coin, which does not allow the transmission of light through the article. In other words, it is the unique nature of the security document of the present application that is not

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taught by the combination of Topcon, Tompkin nor any of the additionally discussed references in the Office Action. For at least these reasons, the independent claim 49 is allowable and not obvious over the teachings of Topcon.

Furthermore, claims 47-49 and 52-53 are dependent upon the independent claim 42. As discussed above, the independent claim 42 is allowable over the teachings of Topcon. Accordingly, claims 47-49 and 52-53 are also allowable as being dependent upon an allowable base claim.

Claims 58-63 and 66-67 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Topcon in view of U.S. Patent Publication No. 2002/0154290 to Tompkin et al (hereinafter Tompkin). The Applicants respectfully disagree with this rejection.

Claims 58 and 59 are dependent upon the independent claim 57. As discussed above, the independent claim 57 is allowable over the teachings of Topcon. Accordingly, claims 58 and 59 are also allowable as being dependent upon an allowable base claim.

Within the Office Action it is stated that with respect to claim 60, that Topcon fails to disclose a detector for detecting the presence of security documents in a window locator for locating a window in the security document incorporating a DOE, and a document processing means for processing the security document according to the signal from the optical detection device.

Tompkin teaches a detector for detecting a coin and locating the diffractive optical element, a processor for processing and analysing signals from the optical detection device and a document processing means for processing security documents according to the signals from the optical diffractive device. By the Examiner's own admission, neither Topcon nor Tompkin disclose a window in the security document, and apart from the fact that a diffractive optical projection element is not a hologram as discussed above, combining Topcon and Tompkin fail to disclose all of the limitations were cited in claim 60. Furthermore, Tompkin teaches away from providing a DOE which may be viewed both in reflection and transmission by providing two diffractive optical elements, one on each side of the coin. Accordingly, the Applicants respectfully submit that the independent claim 60 is allowable over the teachings of Topcon, Tompkin and their combination.

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Claims 61-63 and 66-67 are dependent upon the independent claim 60. As discussed above, the independent claim 60 is allowable over the teachings of Topcon, Tompkin and their combination. Accordingly, claims 61-63 and 66-67 are also allowable as being dependent upon an allowable base claim.

Claims 64-65 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Topcon, in view of Tompkin, and further in view of U.S. Patent No. 6,111,953 to Walker et al (hereinafter Walker). Claims 64-65 are dependent upon the independent claim 60. As discussed above, the independent claim 60 is allowable over the teachings of Topcon and Tompkin. Accordingly, claims 64-65 are also allowable as being dependent upon an allowable base claim.

Applicants respectfully submit that all the claims are now in condition for allowance and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at (414)271-7590 to discuss the say so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,

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